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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,841	07/23/2003	David C. Sudolcan	L-0170.79	8929

7590 07/29/2005

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EXAMINER

THOMPSON, JEWEL VERGIE

ART UNIT PAPER NUMBER

2855

DATE MAILED: 07/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/625,841	Applicant(s) SUDOLCAN ET AL.	
	Examiner Jewel V. Thompson	Art Unit 2855	

(22)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 8-21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/23/03</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-21 in the reply filed on April 25, 2005 is acknowledged.

Information Disclosure Statement

2. Acknowledgement is made of the Information Disclosure Statement filed July 23, 2003, which has been made record of and placed in the file.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Weber (6,539,791).

Regarding claim 1, Weber teaches a sensor for determining flow rate of a fluid through a volume, comprising: a thermistor (10) at least partially inserted into the

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volume (col. 2, lines 50 & 51); and a sensor circuit (12) adapted to cycle the thermistor between a zero-power mode and a self-heated mode (col. 2, 66-67-col. 3, lines 1-3).

Regarding claim 2, Weber teaches the sensor circuit comprises a configurable power controller (24) adapted to cycle the thermistor between a zero-power mode and a self-heated mode (col. 2, 66-67-col. 3, lines 1-3).

Regarding claim 14, Weber teaches the configurable power controller comprises a configurable constant current source (30) adapted to cycle the thermistor between a zero-power mode and a self-heated mode.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber in view of Renger (5,493,100).

Regarding claim 3, Weber teaches the configurable power controller comprises a variable resistance (22). Weber fails to teach a switch in association with the variable resistance, the switch being adapted to cycle the variable resistance between a first value and a second value, the first value being selected to operate the thermistor in the

zero-power mode and the second value being selected to operate the thermistor in the self-heated mode. Renger teaches a switch (29). When the switch is closed, zero electrical current is conducted through the thermistor during this initial off mode, open to ground (col. 3, lines 29-32). The current conducted through the thermistor which a constant voltage is being applied across it will vary according to the thermistor's initial resistance, varies with temperature, this occurs in the 2nd pole closed position (col. 3, lines 51-61); and the 3rd position, open is a constant voltage mode. The current conducted through the thermistor is maintained at its level that existed at the end of the constant-voltage mode. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the switch of Renger in the apparatus of Weber for the purpose of cycling the resistance between closed, constant current and constant voltage in order to balance the temperature.

Regarding Claim 4, Weber teaches the thermistor is in series with the variable resistance between a first side of a power source and a second side of a power source (fig. 2).

Regarding claim 5, Weber teaches the thermistor is arranged in series with the variable resistance at the high side of the power source (fig. 2).

Regarding claim 6, Weber teaches the thermistor is arranged in series with the variable resistance at the low side of the power source (fig. 2).

Regarding claim 7, Weber fails to teach a conversion circuit for use in measuring the voltage drop across the thermistor. Rengar teaches in col. 5, lines 3-7, a voltage sensor measures the resultant voltage drop across the thermistor. It would

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have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the voltage sensor of Rengar in the apparatus of Weber for the purpose of providing a direct measurement of blood flow rate and which is insensitive to variations in ambient temperature (Rengar, col. 5, lines 5-7)

Allowable Subject Matter


5. Claims 8-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jewel V. Thompson whose telephone number is 571-272-2189. The examiner can normally be reached on 7-4:30, off alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jvt
July 27, 2007